

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: MUDGETTS POND	Lake Area (ha):	3.76
Town: DORCHESTER	Maximum depth (m):	7.3
County: Grafton	Mean depth (m):	2.0
River Basin: Connecticut	Volume (m ³):	76500
Latitude: 43°46'03" N	Relative depth:	3.3
Longitude: 71°59'34" W	Shore configuration:	1.02
Elevation (ft): 1710	Areal water load (m/yr):	25.11
Shore length (m): 700	Flushing rate (yr ⁻¹):	12.30
Watershed area (ha): 128.4	P retention coeff.:	0.45
% watershed ponded: 0.0	Lake type:	natural

BIOLOGICAL:

11 February 1998

6 August 1997

DOM. PHYTOPLANKTON (% TOTAL)	#1	SPARSE - NO DOMINANT	MERISMOPEDIA 70%
	#2		
	#3		
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			4.53
DOM. ZOOPLANKTON (% TOTAL)	#1	ROUND CILIATE SPP 43%	KELICOTTIA 38%
	#2	KELICOTTIA 25%	NAUPLIUS LARVA 17%
	#3	ROTIFER SPP 17%	KERATELLA 16%
ROTIFERS/LITER		82	108
MICROCRUSTACEA/LITER		1	52
ZOOPLANKTON ABUNDANCE (#/L)		146	187
VASCULAR PLANT ABUNDANCE			Scattered
SECCHI DISK TRANSPARENCY (m)			2.3
BOTTOM DISSOLVED OXYGEN (mg/L)		0.2	0.2
BACTERIA (E. coli, #/100 ml)	#1		
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 2.5
Hypolimnion volume (m³) : 3500
Anoxic volume (m³) : 3500

CHEMICAL:

Lake: MUDGETTS POND

Town: DORCHESTER

	11 February 1998		6 August 1997		
DEPTH (m)	2.0	4.0	1.0	3.0	6.0
pH (units)	6.0	6.0	5.8	5.9	6.0
A.N.C. (Alkalinity)	5.1	6.6	2.9	2.5	5.6
NITRATE NITROGEN	0.13	0.11	< 0.05	< 0.05	< 0.05
TOTAL KJELDAHL NITROGEN	0.20	0.40	0.38	0.40	0.70
TOTAL PHOSPHORUS	0.008	0.014	0.012	0.013	0.036
CONDUCTIVITY (μ mhos/cm)	27.8	28.2	21.1	20.1	23.4
APPARENT COLOR (cpu)	44	60	47	50	70
MAGNESIUM			0.36		
CALCIUM			2.2		
SODIUM			1.0		
POTASSIUM			0.25		
CHLORIDE	< 2	< 2	< 2	< 2	< 2
SULFATE	4	3	3	4	3
TN : TP	41	36	32	31	19
CALCITE SATURATION INDEX			4.7		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1997

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
4	3	1	1	9	Meso.

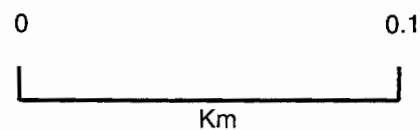
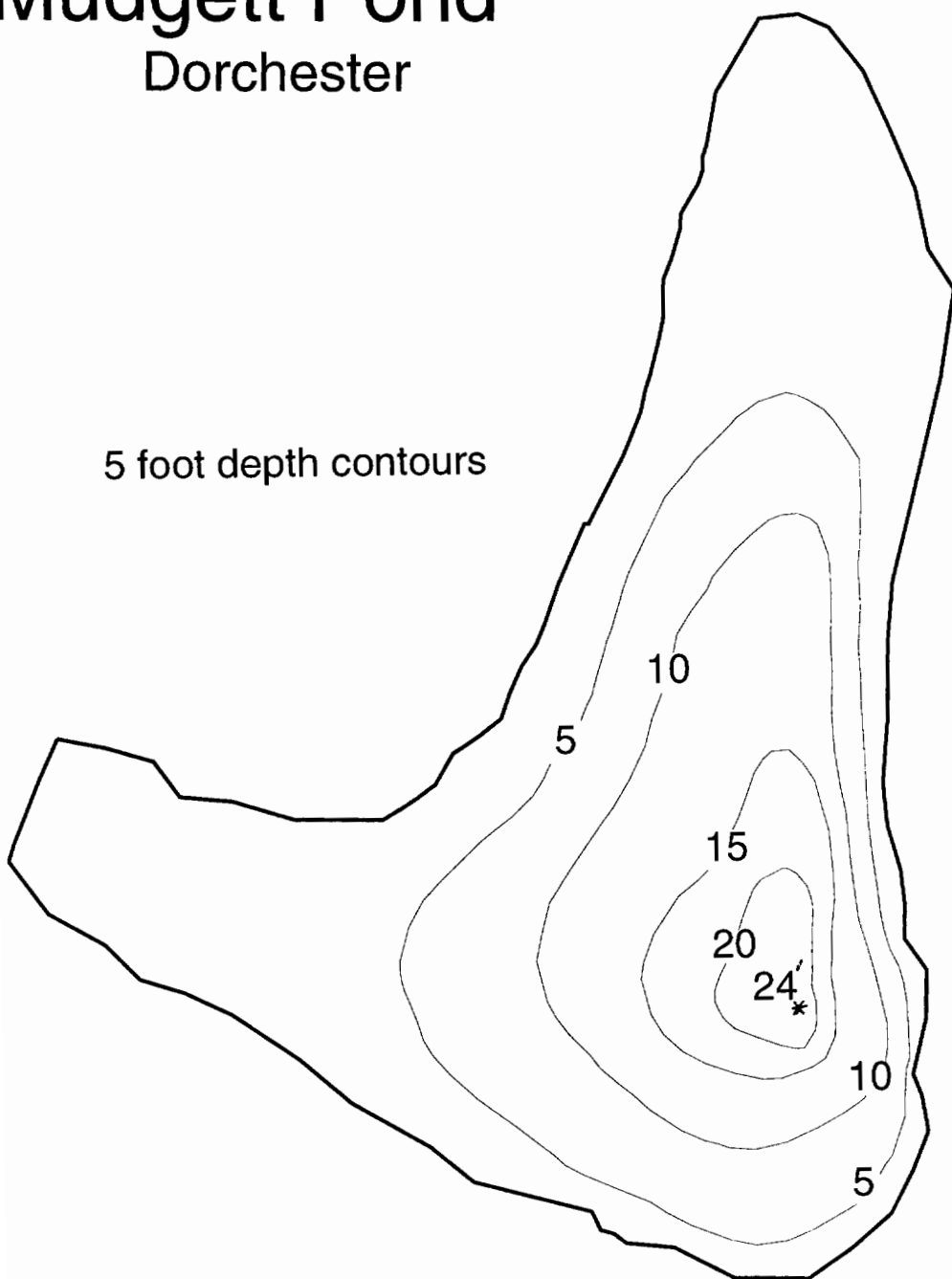
COMMENTS:

1. This remote pond was sampled cooperatively with the NH Fish & Game Department.
2. Mudgetts Pond is a relatively acidic, tea-colored, mesotrophic pond with low conductivity and only fair water clarity (8 feet).
3. The pond bottom was devoid of dissolved oxygen in both winter and summer. The loss of oxygen under the ice is unusual; less than 1% of NH lakes (5 out of 566) have winter bottom dissolved oxygen values of 0.2 mg/L or less. This suggests a very organic bottom sediment exerting an oxygen demand on the overlying waters.

Mudgett Pond

Dorchester

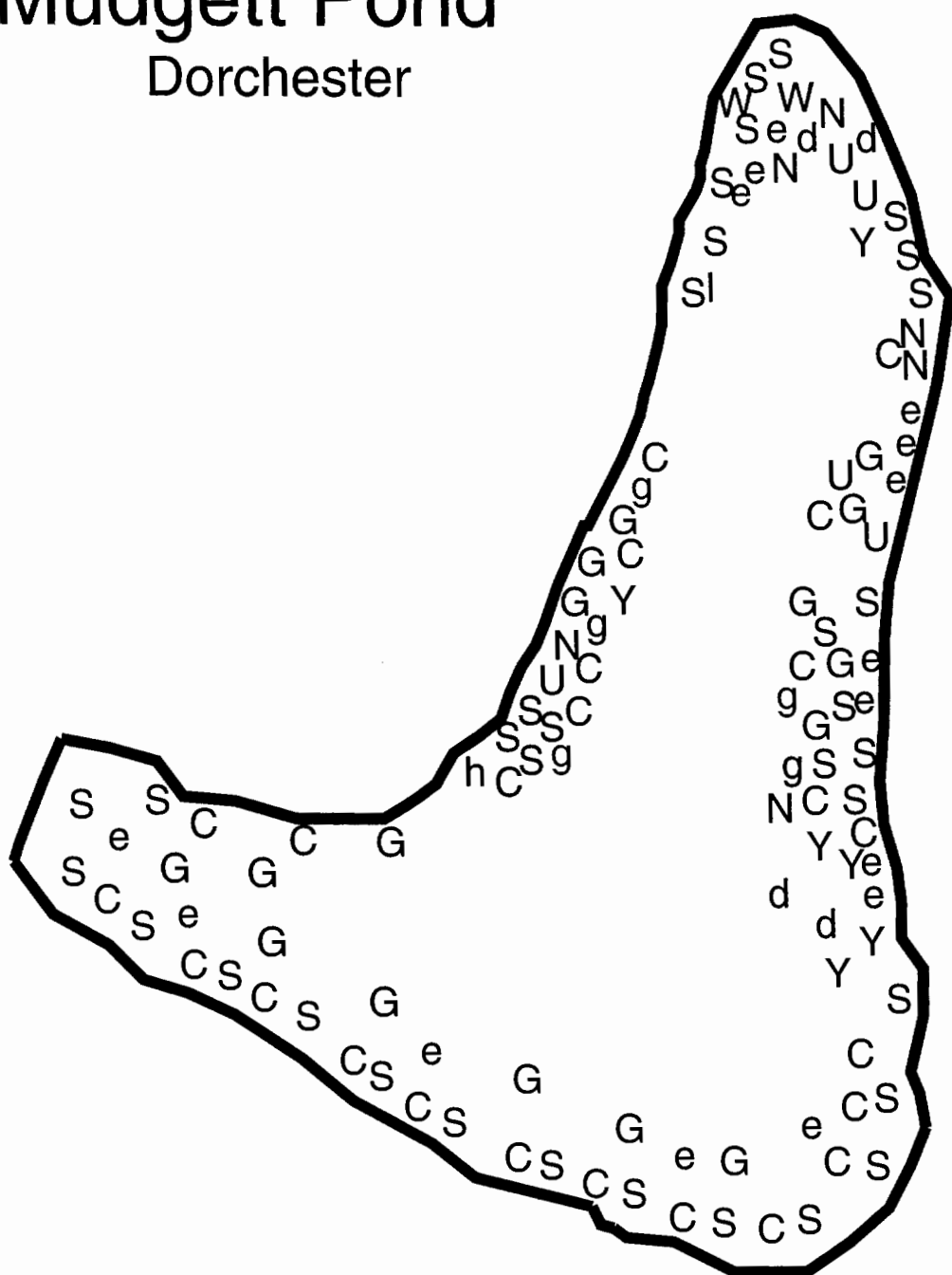
5 foot depth contours



[illegible]

Mudgett Pond

Dorchester



A horizontal scale bar with vertical end caps. The number '0' is at the left end and '0.1' is at the right end. Below the bar, the unit 'Km' is centered.

[illegible]